**In the Claims**

Claims 25 - 28 have been added as follows:

--25. (New) A waveguide to microstrip T-junction comprising:

a microstrip transmission line structure having a ground plane separated from a strip conductor by a dielectric layer, said ground plane defining an aperture;

quarter wavelength matching sections in the microstrip transmission line

a waveguide channel having a conductive periphery being electrically coupled to the ground plane to provide a waveguide short circuit wall located at the end of the waveguide channel;

at least one conducting ridge inside the waveguide channel; and

an end of the ridge being electrically coupled with the ground plane.--

--26. (New) A waveguide to microstrip T-junction comprising:

a microstrip transmission line structure having a ground plane separated from a strip conductor by a dielectric layer, said ground plane defining an aperture;

an open circuited stub, and a quarter wavelength matching section in the microstrip transmission line;

a waveguide channel having a conductive periphery being electrically coupled to the ground plane to provide a waveguide short circuit wall located at the end of the waveguide channel;

at least one conducting ridge inside the waveguide channel; and

an end of the ridge being electrically coupled with the ground plane.--

--27 (New) A waveguide to microstrip T-junction comprising:

a microstrip transmission line structure having a ground plane separated from a strip conductor by a dielectric layer, said ground plane defining an aperture;

a short circuited stub using a via, and a quarter wavelength matching section in the microstrip transmission line;

a waveguide channel having a conductive periphery being electrically coupled to the ground plane to provide a waveguide short circuit wall located at the end of the waveguide channel;

at least one conducting ridge inside the waveguide channel; and

an end of the ridge being electrically coupled with the ground plane.--

--28. (New) A waveguide to microstrip T-junction comprising:

a microstrip transmission line structure having a ground plane separated from a strip conductor by a dielectric layer;

a waveguide channel having a conductive periphery being electrically coupled to the ground plane to provide a waveguide short circuit wall located at the end of the waveguide channel;

a single finite length, rectangular cross-sectional conducting ridge inside the waveguide channel, such that the ridge is electrically coupled to the waveguide periphery, the end of the ridge is electrically coupled with the ground plane at the end of the waveguide channel, and the ridge provides a gap between itself and the waveguide periphery; and

a C-shaped aperture in the ground plane section circumscribed by the waveguide periphery and ridge coupling with the ground plane.--